SEQUENCE LISTING

<110> Reed, John

<120> Regulation of BCL-2 Gene Expression

<130> 10412-011

<140> 09/375,514

<141> 2001-08-17

<160> 29

<170> PatentIn version 3.0

<210> 1

<211> 20

<212> DNA

<213> Homo sapiens

<400> 1
cagcgtgcgc catccttccc   20

<210> 2

<211> 35

<212> DNA

<213> Homo sapiens

<400> 2
cttttcctct gggaaggatg gcgcacgctg ggaga   35

1

<210> 3

<211> 20

<212> DNA

<213> Homo sapiens

<400> 3
gatgcaccta cccagcctcc   20

<210> 4

<211> 33

<212> DNA

<213> Homo sapiens

<400> 4
acggggtacg gaggctgggt aggtgcatct ggt   33

<210> 5

<211> 20

<212> DNA

<213> Homo sapiens

<400> 5
acaaaggcat cctgcagttg   20

<210> 6

<211> 36

<212> DNA

<213> Homo sapiens

<400> 6
cccccaactg caggatgcct ttgtggaact gtacgg   36

<210> 7

```
<211>  20

<212>  DNA

<213>  Homo sapiens


<400>  7
gggaaggatg gcgcacgctg                                                        20


<210>  8

<211>  17

<212>  DNA

<213>  Homo sapiens


<400>  8
cgcgtgcgac cctcttg                                                           17


<210>  9

<211>  17

<212>  DNA

<213>  Homo sapiens


<400>  9
taccgcgtgc gaccctc                                                           17


<210>  10

<211>  17

<212>  DNA

<213>  Homo sapiens


<400>  10
tcctaccgcg tgcgacc                                                           17


<210>  11

<211>  17
```

D² (con't.)

<212> DNA

<213> Homo sapiens

<400> 11
ccttcctacc gcgtgcg   17

<210> 12

<211> 17

<212> DNA

<213> Homo sapiens

<400> 12
gacccttcct accgcgt   17

<210> 13

<211> 17

<212> DNA

<213> Homo sapiens

<400> 13
ggagaccctt cctaccg   17

<210> 14

<211> 15

<212> DNA

<213> Homo sapiens

<400> 14
gcggcggcag cgcgg   15

<210> 15

<211> 15

<212> DNA

4

<213>   Homo sapiens

<400>   15
cggcggggcg acgga   15

<210>   16

<211>   16

<212>   DNA

<213>   Homo sapiens

<400>   16
cgggagcgcg gcgggc   16

<210>   17

<211>   18

<212>   DNA

<213>   Homo sapiens

<400>   17
tctcccagcg tgcgccat   18

<210>   18

<211>   18

<212>   DNA

<213>   Homo sapiens

<400>   18
tgcactcacg ctcggcct   18

<210>   19

<211>   5086

<212>   DNA

<213>   Homo sapiens

5

<400> 19

```
gcgcccgccc ctccgcgccg cctgcccgcc cgcccgccgc gctcccgccc gccgctctcc      60

gtggccccgc cgcgctgccg ccgccgccgc tgccagcgaa ggtgccgggg ctccgggccc     120

tccctgccgg cggccgtcag cgctcggagc gaactgcgcg acgggaggtc cgggaggcga     180

ccgtagtcgc gccgccgcgc aggaccagga ggaggagaaa gggtgcgcag cccggaggcg     240

gggtgcgccg gtggggtgca gcggaagagg gggtccaggg gggagaactt cgtagcagtc     300

atccttttta ggaaaagagg gaaaaaataa aaccctcccc caccacctcc ttctccccac     360

ccctcgccgc accacacaca gcgcgggctt ctagcgctcg gcaccggcgg gccaggcgcg     420

tcctgccttc atttatccag cagcttttcg gaaaatgcat ttgctgttcg gagtttaatc     480

agaagacgat tcctgcctcc gtccccggct ccttcatcgt cccatctccc ctgtctctct     540

cctggggagg cgtgaagcgg tcccgtggat agagattcat gcctgtgtcc gcgcgtgtgt     600

gcgcgcgtat aaattgccga gaaggggaaa acatcacagg acttctgcga ataccggact     660

gaaaattgta attcatctgc cgccgccgct gccaaaaaaa aactcgagct cttgagatct     720

ccggttggga ttcctgcgga ttgacatttc tgtgaagcag aagtctggga atcgatctgg     780

aaatcctcct aatttttact ccctctcccc ccgactcctg attcattggg aagtttcaaa     840

tcagctataa ctggagagtg ctgaagattg atgggatcgt tgccttatgc atttgttttg     900

gttttacaaa aaggaaactt gacagaggat catgctgtac ttaaaaaata caagtaagtc     960

tcgcacagga aattggttta atgtaacttt caatggaaac ctttgagatt ttttacttaa    1020

agtgcattcg agtaaattta atttccaggc agcttaatac attgtttta gccgtgttac     1080

ttgtagtgtg tatgccctgc tttcactcag tgtgtacagg gaaacgcacc tgattttta     1140

cttattagtt tgttttttct ttaacctttc agcatcacag aggaagtaga ctgatattaa    1200

caatacttac taataataac gtgcctcatg aaataaagat ccgaaaggaa ttggaataaa    1260

aatttcctgc gtctcatgcc aagagggaaa caccagaatc aagtgttccg cgtgattgaa    1320

gacacccct cgtccaagaa tgcaaagcac atccaataaa atagctggat tataactcct    1380

cttctttctc tgggggccgt ggggtgggag ctggggcgag aggtgccgtt ggcccccgtt    1440

gcttttcctc tgggaaggat ggcgcacgct gggagaacgg ggtacgacaa ccgggagata    1500

gtgatgaagt acatccatta taagctgtcg cagaggggct acgagtggga tgcgggagat    1560

gtgggcgccg cgcccccggg ggccgccccc gcaccgggca tcttctcctc ccagcccggg    1620

cacacgcccc atccagccgc atcccgcgac ccggtcgcca ggacctcgcc gctgcagacc    1680
```

6

```
ccggctgccc ccggcgccgc cgcggggcct gcgctcagcc cggtgccacc tgtggtccac   1740

ctggccctcc gccaagccgg cgacgacttc tcccgccgct accgcggcga cttcgccgag   1800

atgtccagcc agctgcacct gacgcccttc accgcgcggg gacgctttgc cacggtggtg   1860

gaggagctct tcagggacgg ggtgaactgg gggaggattg tggccttctt tgagttcggt   1920

ggggtcatgt gtgtggagag cgtcaaccgg gagatgtcgc ccctggtgga caacatcgcc   1980

ctgtggatga ctgagtacct gaaccggcac ctgcacacct ggatccagga taacggaggc   2040

tgggatgcct ttgtggaact gtacggcccc agcatgcggc ctctgtttga tttctcctgg   2100

ctgtctctga agactctgct cagtttggcc ctggtgggag cttgcatcac cctgggtgcc   2160

tatctgagcc acaagtgaag tcaacatgcc tgccccaaac aaatatgcaa aaggttcact   2220

aaagcagtag aaataatatg cattgtcagt gatgtaccat gaaacaaagc tgcaggctgt   2280

ttaagaaaaa ataacacaca tataaacatc acacacacag acagacacac acacacacaa   2340

caattaacag tcttcaggca aaacgtcgaa tcagctattt actgccaaag ggaaatatca   2400

tttatttttt acattattaa gaaaaaagat ttatttattt aagacagtcc catcaaaact   2460

ccgtctttgg aaatccgacc actaattgcc aaacaccgct tcgtgtggct ccacctggat   2520

gttctgtgcc tgtaaacata gattcgcttt ccatgttgtt ggccggatca ccatctgaag   2580

agcagacgga tggaaaaagg acctgatcat tggggaagct ggctttctgg ctgctggagg   2640

ctggggagaa ggtgttcatt cacttgcatt tctttgccct gggggcgtga tattaacaga   2700

gggagggttc ccgtgggggg aagtccatgc ctccctggcc tgaagaagag actctttgca   2760

tatgactcac atgatgcata cctggtggga ggaaaagagt tgggaacttc agatggacct   2820

agtacccact gagatttcca cgccgaagga cagcgatggg aaaaatgccc ttaaatcata   2880

ggaaagtatt tttttaagct accaattgtg ccgagaaaag cattttagca atttatacaa   2940

tatcatccag taccttaaac cctgattgtg tatattcata tattttggat acgcaccccc   3000

caactcccaa tactggctct gtctgagtaa gaaacagaat cctctggaac ttgaggaagt   3060

gaacatttcg gtgacttccg atcaggaagg ctagagttac ccagagcatc aggccgccac   3120

aagtgcctgc ttttaggaga ccgaagtccg cagaacctac ctgtgtccca gcttggaggc   3180

ctggtcctgg aactgagccg ggccctcact ggcctcctcc agggatgatc aacagggtag   3240

tgtggtctcc gaatgtctgg aagctgatgg atggagctca gaattccact gtcaagaaag   3300

agcagtagag gggtgtggct gggcctgtca ccctggggcc ctccaggtag gcccgttttc   3360

acgtggagca taggagccac gacccttctt aagacatgta tcactgtaga gggaaggaac   3420
```

7

```
agaggccctg ggccttccta tcagaaggac atggtgaagg ctgggaacgt gaggagaggc    3480

aatggccacg gcccattttg gctgtagcac atggcacgtt ggctgtgtgg ccttggccac    3540

ctgtgagttt aaagcaaggc tttaaatgac tttggagagg gtcacaaatc ctaaaagaag    3600

cattgaagtg aggtgtcatg gattaattga cccctgtcta tggaattaca tgtaaaacat    3660

tatcttgtca ctgtagtttg gttttatttg aaaacctgac aaaaaaaaag ttccaggtgt    3720

ggaatatggg ggttatctgt acatcctggg gcattaaaaa aaaatcaatg gtggggaact    3780

ataaagaagt aacaaagaa gtgacatctt cagcaaataa actaggaaat ttttttttct    3840

tccagtttag aatcagcctt gaaacattga tggaataact ctgtggcatt attgcattat    3900

ataccattta tctgtattaa ctttggaatg tactctgttc aatgtttaat gctgtggttg    3960

atatttcgaa agctgcttta aaaaaataca tgcatctcag cgttttttg tttttaattg    4020

tatttagtta tggcctatac actatttgtg agcaaaggtg atcgttttct gtttgagatt    4080

tttatctctt gattcttcaa aagcattctg agaaggtgag ataagccctg agtctcagct    4140

acctaagaaa aacctggatg tcactggcca ctgaggagct ttgtttcaac caagtcatgt    4200

gcatttccac gtcaacagaa ttgtttattg tgacagttat atctgttgtc cctttgacct    4260

tgtttcttga aggtttcctc gtccctgggc aattccgcat ttaattcatg gtattcagga    4320

ttacatgcat gtttggttaa acccatgaga ttcattcagt taaaaatcca gatggcgaat    4380

gaccagcaga ttcaaatcta tggtggtttg acctttagag agttgcttta cgtggcctgt    4440

ttcaacacag acccacccag agccctcctg ccctccttcc gcggggctt tctcatggct     4500

gtccttcagg gtcttcctga aatgcagtgg tcgttacgct ccaccaagaa agcaggaaac    4560

ctgtggtatg aagccagacc tccccggcgg gcctcaggga acagaatgat cagacctttg    4620

aatgattcta attttaagc aaaatattat tttatgaaag gtttacattg tcaaagtgat     4680

gaatatggaa tatccaatcc tgtgctgcta tcctgccaaa atcattttaa tggagtcagt    4740

ttgcagtatg ctccacgtgg taagatcctc caagctgctt tagaagtaac aatgaagaac    4800

gtggacgttt ttaatataaa gcctgttttg tcttttgttg ttgttcaaac gggattcaca    4860

gagtatttga aaaatgtata tatattaaga ggtcacgggg gctaattgct agctggctgc    4920

cttttgctgt ggggtttttgt tacctggttt taataacagt aaatgtgccc agcctcttgg    4980

ccccagaact gtacagtatt gtggctgcac ttgctctaag agtagttgat gttgcatttt    5040

ccttattgtt aaaaacatgt tagaagcaat gaatgtatat aaaagc                   5086
```

<210>   20

8

<211> 239

<212> PRT

<213> Homo sapiens

<400> 20

Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1   5   10   15

Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
                20   25   30

Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
            35   40   45

Phe Ser Ser Gln Pro Gly His Thr Pro His Pro Ala Ala Ser Arg Asp
        50   55   60

Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
65   70   75   80

Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Pro Val Val His Leu Ala
                85   90   95

Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Gly Asp Phe
                100   105   110

Ala Glu Met Ser Ser Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
            115   120   125

Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
            130   135   140

Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
145   150   155   160

Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
                165   170   175

Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
            180   185   190

Gly Gly Trp Asp Ala Phe Val Glu Leu Tyr Gly Pro Ser Met Arg Pro
            195   200   205

Leu Phe Asp Phe Ser Trp Leu Ser Leu Lys Thr Leu Leu Ser Leu Ala
    210   215   220

Leu Val Gly Ala Cys Ile Thr Leu Gly Ala Tyr Leu Ser His Lys
225   230   235

<210> 21

<211> 239

9

<212>   PRT

<213>   Homo sapiens

<400>   21

Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1   5   10   15

Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
            20   25   30

Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
            35   40   45

Phe Ser Ser Gln Pro Gly His Thr Pro His Pro Ala Ala Ser Arg Asp
        50   55   60

Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
65   70   75   80

Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Pro Val Val His Leu Ala
                85   90   95

Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Gly Asp Phe
            100   105   110

Ala Glu Met Ser Ser Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
            115   120   125

Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
        130   135   140

Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
145   150   155   160

Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
                165   170   175

Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
            180   185   190

Gly Gly Trp Asp Ala Phe Val Glu Leu Tyr Gly Pro Ser Met Arg Pro
            195   200   205

Leu Phe Asp Phe Ser Trp Leu Ser Leu Lys Thr Leu Leu Ser Leu Ala
        210   215   220

Leu Val Gly Ala Cys Ile Thr Leu Gly Ala Tyr Leu Ser His Lys
225   230   235

<210>   22

<211>   205

<212>   PRT

10

```
Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1               5                   10                  15

Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
            20                  25                  30

Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
        35                  40                  45

Phe Ser Ser Gln Pro Gly His Thr Pro His Pro Ala Ala Ser Arg Asp
    50                  55                  60

Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
65                  70                  75                  80

Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Pro Val Val His Leu Ala
            85                  90                  95

Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Gly Asp Phe
            100                 105                 110

Ala Glu Met Ser Ser Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
            115                 120                 125

Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
    130                 135                 140

Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
145                 150                 155                 160

Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
            165                 170                 175

Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
            180                 185                 190

Gly Gly Trp Val Gly Ala Ser Gly Asp Val Ser Leu Gly
        195                 200                 205
```

```
Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
```

11

```
        1                5                      10                    15

Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
            20                   25                   30

Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
            35                   40                   45

Phe Ser Ser Gln Pro Gly His Thr Pro His Pro Ala Ala Ser Arg Asp
    50                   55                   60

Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
65                   70                   75                       80

Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Pro Val Val His Leu Ala
                85                   90                   95

Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Gly Asp Phe
            100                  105                  110

Ala Glu Met Ser Ser Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
            115                  120                  125

Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
    130                  135                  140

Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
145                  150                  155                      160

Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
                165                  170                  175

Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
                180                  185                  190

Gly Gly Trp Val Gly Ala Ser Gly Asp Val Ser Leu Gly
            195                  200                  205
```

<210> 24

<211> 18

<212> DNA

<213> Homo sapiens

<400> 24
tctcccagcg tgcgccat   18

<210> 25

<211> 18

<212> DNA

12

<213>   Homo sapiens

<400>   25
tgcactcacg ctcggcct   18

<210>   26

<211>   20

<212>   DNA

<213>   Homo sapiens

<400>   26
gcgcggcggg cgggcgggca   20

<210>   27

<211>   20

<212>   DNA

<213>   Homo sapiens

<400>   27
gggcggaggc cggccggcgg   20

<210>   28

<211>   20

<212>   DNA

<213>   Homo sapiens

<400>   28
agcggcggcg gcggcagcgc   20

<210>   29

<211>   20

<212>   DNA

<213>   Homo sapiens

13

<400> 29
gggccgggaa gggcgcccgc   20

D² (cont.)